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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,239	01/20/2000	Norikane Nabata	Q57646	2929

7590 11/22/2005
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EXAMINER

VO, HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/487,239

Applicant(s)

NABATA ET AL.

Examiner

Hai Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The art rejections are withdrawn in view of the present amendment. Neither Dauber nor Takiguchi teaches or suggests the pore size and porosity of the polytetrafluoro ethylene (PTFE) porous film. However, upon further consideration, new ground of rejection is made in view of Dauber et al (US 5,538,545), Takiguchi et al (US 5,804,074) and Harada et al (US 5,234,751).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dauber et al (US 5,538,545) in view of Takiguchi et al (US 5,804,074) and Harada et al (US 5,234,751). Dauber teaches a sorbent filter comprising at least one protective support layer 41, 44; at least one filter layer 42, 43; and an inner sorbent core 48 (figure 4B). Dauber teaches that the protective support layer is made of a porous expanded polyethylene film (claim 12). Dauber teaches that the filter layer is formed from a porous expanded PTFE film (claim 3). Dauber does not specifically disclose the support layer made of an ultra high molecular weight polyethylene (UHMWPE) porous film. Takiguchi, however, teaches a multilayer porous plastic filter comprising at least two layers formed by combining and unifying a small particle porous layer and a large particle porous layer (abstract). Takiguchi teaches the small particle porous layer made of polytetrafluoroethylene (PTFE) (claim 15, column 4,

lines 21-25). Takiguchi teaches the large particle porous layer formed from UHMWPE particles linked together forming pores among them (column 4, lines 63-66). Takiguchi also teaches the use of porous layer of UHMWPE particles in view of the mechanical strength (column 5, lines 20-23). This is important to the expectation of successfully practicing the invention of Dauber and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the ultra high molecular weight polyethylene porous film for the expanded polyethylene film of the Dauber support layer motivated by the desire to provide the sorbent filter with higher mechanical strength.

Neither Dauber nor Takiguchi teaches or suggests the pore size and porosity of the PTFE porous film. Harada, however, teaches a PTFE porous film for use in air filters having a pore size of 0.01 to 1 micron and a porosity of 80 to 95% within the claimed ranges (column 6, line 65 et seq.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the PTFE porous film with the pore size and porosity in the ranges as taught by Harada motivated by the desire to provide the sorbent filter with higher mechanical strength, excellent flexibility, improved gas permeability, heat resistance and dimensional stability (see Harada, column 8, lines 15-22).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo

**HAI VO
PRIMARY EXAMINER**